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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/577,315	04/28/2006	Wolfgang Fick	2003P15434WOUS	5156
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SIEMENS CORPORATION INTELLECTUAL PROPERTY DEPARTMENT 170 WOOD AVENUE SOUTH ISELIN, NJ 08830			EXAMINER BHARADWAJ, KALPANA	
			ART UNIT	PAPER NUMBER
			2129	
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			03/06/2008	PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

### Office Action Summary

**Application No.**

10/577,315

**Applicant(s)**

FICK ET AL

**Examiner**

KALPANA BHARADWAJ

**Art Unit**

2129

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 28 April 2006.  
2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.  
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 5-12 is/are pending in the application.  
4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.  
5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.  
6) ☒ Claim(s) 5-12 is/are rejected.  
7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.  
8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.  
10) ☒ The drawing(s) filed on 28 April 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)  
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)  
3) ☒ Information Disclosure Statement(s) (PTO/CIS)  
Paper No(s)/Mail Date 04/28/2006  
4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_  
5) ☐ Notice of Informal Patent Application  
6) ☐ Other: \_\_\_\_\_

## DETAILED ACTION

### *Status of Claims*

1. Claims 5-12 are pending in this application. Claims 1-4 are canceled.

### *Claim Rejections - 35 USC § 102*

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 5-9 are rejected under 35 U.S.C. 102(e) as being anticipated by Solomon (USPN 2004/0162638, referred to as **Solomon**).

#### **Claim 5:**

Solomon teaches a method for the operation of a technical system, comprising:

recording a plurality of operating parameters of a system during a time interval

(**Solomon**, ¶ 0038: collective data acquisition); and

determining an operating or functional mode of the technical system from the temporal behavior (**Solomon**, ¶ 0037: behavior-based reactive MRS architecture) the operating parameters using artificial intelligence methods selected from the group consisting of (**Solomon**, ¶ 0025: artificial intelligence):

neuronal network (**Solomon**, ¶ 0025: artificial neural networks), fuzzy logic (**Solomon**, ¶ 0047: using fuzzy logic), combined neuro/fuzzy method (**Solomon**, ¶ 0025: artificial intelligence; robotic agents; ¶ 0047: using fuzzy logic), and genetic algorithm (**Solomon**, ¶ 0027: genetic algorithms).

**Claim 6:**

Solomon teaches the method according to claim 5, wherein an operating and a functional mode of the technical system are determined from the temporal behavior the operating parameters (**Solomon**, ¶ 0197: temporal objects) using artificial intelligence methods selected from the group consisting of:

neural network, fuzzy logic, combined neuro/fuzzy method, and genetic algorithm (**EN**: see claim 1 for rejection).

**Claim 7:**

Solomon teaches the method according to claim 5, wherein the operating parameters are recorded as data sets during a plurality of temporally separate time intervals (**Solomon**, ¶ 0031: Reprogrammable ... uploaded at any time) and the data sets are compared using the artificial intelligence methods, and an adjustment of the operating parameters (**Solomon**, ¶ 0031: mission objective alteration; **EN**: 'alteration' would involve adjustment to the operating parameters) is determined in order to achieve a desired operating mode of the technical system.

**Claim 8:**

Solomon teaches the method according to claim 7, wherein a probability that an adjustment of the operating parameters provides for the desired operating mode is

determined (**Solomon**, ¶ 0041: probabilities of winning; ¶ 0047: assess probabilities and thresholds).

**Claim 9:**

Solomon teaches the method according to claim 8, wherein the operating mode of the technical system is determined using a correlation analysis of the operating parameters, wherein the result of changes in operating parameters that correspond to input parameters is determined based on operating parameters which correspond to output parameters (**Solomon**, ¶ 0029: collective learning and decision making; **EN**: 'learning' is to do a correlation analysis and find the correspondence between output and input parameters to achieve a certain result).

***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 10-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Solomon as applied to claim 5-9 above, and further in view of Ma (USPN 2002/0136260, referred to as **Ma**).

**Claim 10:**

Solomon teaches:

recording operating parameters of at least part of a system during a time interval;  
determining an operating mode or functional mode of the technical system from the temporal behavior the operating parameters using artificial intelligence methods selected from the group consisting of:

neural network, fuzzy logic, combined neuro/fuzzy method, and genetic algorithm;

Solomon does not teach the method of controlling the operation of a power station, comprising:

assigning a fingerprint to the operating parameter by the artificial intelligence method;

comparing the fingerprint to a predetermined fingerprint; and adjusting the operating parameters of the power station in order to achieve a desired operation of the power station.

However, Ma teaches teach the method of controlling the operation of a power station, comprising (**Ma**, ¶ 0006: power stations):

assigning a fingerprint to the operating parameter by the artificial intelligence method (**Ma**, ¶ 0051: characteristic signatures; variation patterns; **EN**: 'signatures' using patterns, is to fingerprint by the AI method);

comparing the fingerprint to a predetermined fingerprint (**Ma**, ¶ 0051: compared against stored values); and adjusting the operating parameters of the power station in

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order to achieve a desired operation of the power station (**Ma**, ¶ 0051: regulates ... in a mode that is appropriate; **EN**: 'regulating' is to adjust).

Solomon and Ma are from the same field of endeavor, controlling parameters. It would have been obvious to one of ordinary skill in the art to have modified Solomon's grouping of mobile agents with predetermined signatures, for the benefit of a controller being able to predict the onset of several conditions (**Ma**, ¶ 0051).

**Claim 11:**

Solomon modified by Ma teaches the method according to claim 10, wherein a probability that an adjustment of the operating parameters provides for the desired operating mode is determined (**Solomon**, ¶ 0041: probabilities of winning; ¶ 0047: assess probabilities and thresholds).

**Claim 12:**

Solomon modified by Ma teaches the method according to claim 11, wherein the operating mode of the power station is determined using a correlation analysis of the operating parameters, wherein the result of changes in operating parameters that correspond to input parameters is determined based on operating parameters which correspond to output parameters (**Solomon**, ¶ 0029: collective learning and decision making; **EN**: 'learning' is to do a correlation analysis and find the correspondence between output and input parameters to achieve a certain result).

### **Examinations Considerations**

5. Examiner's Notes (**EN**) are provided with the cited references to prior art to assist the applicant to better understand the nature of the prior art, application of such prior art and, as appropriate, to further indicate other prior art that maybe applied in other office actions. Such comments are entirely consistent with the intent and spirit of compact prosecution. However, and unless otherwise stated, the Examiner's Notes are not prior art but a link to prior art that one of ordinary skill in the art would find inherently appropriate.

6. Examiner has cited particular columns and line numbers (or paragraphs) in the references applied to the claims above for the convenience of the applicant. Although the specified citations are representative of the teachings of the art and are applied to specific limitations within the individual claim, other passages and figures may apply as well. It is respectfully requested from the Applicant in preparing responses, to fully consider the references in their entirety as potentially teaching all or part of the claimed invention, as well as the context of the passage as taught by the prior art or disclosed by the Examiner. The entire reference is considered to provide disclosure relating to the claimed invention.

### ***Conclusion***

7. Claims 5-12 are rejected.



8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

- a. Warren, USPN 2003/0100824, cited for methods using AI.

### ***Correspondence Information***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to KALPANA BHARADWAJ whose telephone number is (571)270-1641. The examiner can normally be reached on Monday-Friday 7:30am 5:00 pm EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Vincent can be reached on (571) 272-3080. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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/Bharadwaj Kalpana/  
Examiner, Art Unit 2129

/David R Vincent/  
Supervisory Patent Examiner, Art Unit 2129